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28. Juni 2000



Notice of Opposition to a European Patent

To the
European Patent Office

Tabulation marks

		for EPO use only	
I. Patent opposed <div style="text-align: center;"> Zur Kasse <i>Dr 1138192</i> </div>		Opp. No.	OPPO (1)
Patent No.		0 877 130 B1	
Application No.		98201555.4	
Date of mention of the grant in the European Patent Bulletin (Art. 97(4), 99(1) EPC)		26.01.2000	
Title of the invention: A flooring system comprising a plurality of floor panels which are mechanically connected to each other.			
II. Proprietor of the Patent first named in the patent specification Välinge Aluminium AB			
Opponent's or representative's reference (max. 15 spaces)		OREF	
III. Opponent Name Address State of residence or of principal place of business Telephone/Telex/Fax Multiple opponents		OPPO (2) Perstorp AB S-28480 Perstorp Sweden <input type="checkbox"/> further opponents see additional sheet	
IV. Authorisation 1. Representative (Name only one representative to whom notification is to be made) Name Address of place of business Telephone/Telex/Fax Additional representative(s) 2. Employee(s) of the opponent authorised for these opposition proceedings under Art. 133(3) EPC Authorisation(s) To 1/2		C. Furlong OPPO (9) HOFFMANN • EITLE PATENT- UND RECHTSANWÄLTE D-81925 MÜNCHEN • ARABELLSTRASSE 4 (Assoc. No. 151) 92409-118 — 918 356 <input type="checkbox"/> (on additional sheet/see authorisation) OPPO (5) Name(s): <input checked="" type="checkbox"/> not considered necessary <input type="checkbox"/> has/have been registered under No. <input type="checkbox"/> is/are enclosed	

<p>V. Opposition is filed against</p> <p>— the patent as a whole <input checked="" type="checkbox"/></p> <p>— claim(s) No(s). <input type="text"/></p>	<p>for EPO use only</p>	
<p>VI. Grounds for opposition:</p> <p>Opposition is based on the following grounds:</p> <p>(a) the subject-matter of the European patent opposed is not patentable (Art. 100(a) EPC) because:</p> <p>— it is not new (Art. 52(1); 54 EPC) <input checked="" type="checkbox"/></p> <p>— it does not involve an inventive step (Art. 52(1); 56 EPC) <input checked="" type="checkbox"/></p> <p>— patentability is excluded on other grounds, i. e. <input type="text"/> Art. <input type="text"/></p> <p>(b) the patent opposed does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Art. 100(b) EPC; see Art. 83 EPC). <input type="checkbox"/></p> <p>(c) the subject-matter of the patent opposed extends beyond the content of the application/ of the earlier application as filed (Art. 100(c) EPC, see Art. 123(2) EPC). <input checked="" type="checkbox"/></p>		
<p>VII. Facts and arguments (Rule 55(c) EPC) presented in support of the opposition are submitted herewith on a separate sheet (annex 1)</p>		<input checked="" type="checkbox"/>
<p>VIII. Other requests:</p> <p>oral proceedings are requested in case the patent is not revoked in written proceedings.</p>		

IX. Evidence presented see the attached annex "Facts and Arguments"		Enclosed = <input type="checkbox"/> will be filed at a later date = <input type="checkbox"/>	for EPO use only
A. Publications:			Publication date
1 Particular relevance (page, column, line, fig.):			
2 Particular relevance (page, column, line, fig.):			
3 Particular relevance (page, column, line, fig.):			
4 Particular relevance (page, column, line, fig.):			
5 Particular relevance (page, column, line, fig.):			
6 Particular relevance (page, column, line, fig.):			
7 Particular relevance (page, column, line, fig.):			
Continued on additional sheet		<input type="checkbox"/>	
B. Other evidence			
Continued on additional sheet		<input type="checkbox"/>	

X. Payment of the opposition fee is made

☒ as indicated in the enclosed voucher for payment of fees and costs (EPO Form 1010)

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XI. List of documents

Enclosure
No.

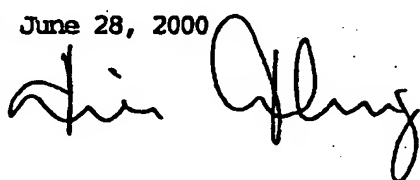
No. of copies

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|----|---|---|
| 0 | <input checked="" type="checkbox"/> Form for notice of opposition | <input type="text" value="3"/> (min. 2) |
| 1 | <input checked="" type="checkbox"/> Facts and arguments (see VII.) | <input type="text" value="3"/> (min. 2) |
| 2 | Copies of documents presented as evidence (see IX.) | |
| 2a | <input type="checkbox"/> — Publications | <input type="text" value="3"/> (min. 2 of each) |
| 2b | <input type="checkbox"/> — Other documents | <input type="text"/> (min. 2 of each) |
| 3 | <input type="checkbox"/> Signed authorisation(s) (see IV.) | <input type="text"/> |
| 4 | <input type="checkbox"/> Voucher for payment of fees and costs (see X.) | <input type="text" value="1"/> |
| 5 | <input type="checkbox"/> Cheque | <input type="text"/> |
| 6 | <input type="checkbox"/> Additional sheet(s) | <input type="text"/> (min. 2 of each) |
| 7 | <input type="checkbox"/> Other (please specify here): | <input type="text"/> |

**XII. Signature
of opponent or representative**

Place **Munich,**

Date **June 28, 2000**



Please type name under signature. In the case of legal persons, the position which the person signing holds within the company should also be typed.

Facts and Arguments

1. Subject matter of EP 0 877 130 B1

EP 0 877 130 B1 (the Opposed Patent in the following) relates to a flooring system comprising a plurality of floor panels which are mechanically connected to each other. In the description of prior art systems on pages 1 and 2 of the B1-publication of the Opposed Patent, various disadvantages of these known systems are described, including the need to use adhesive or separate mechanical connecting means between the individual panels of the flooring system to prevent their mutual displacement after they have been laid. Some systems are also described as being disadvantageous in that only the long sides can be connected.

The technical problem to be solved by the Opposed Patent is described at page 2, lines 22 to 47 and particularly resides in providing a flooring system which overcomes the disadvantages of the prior art as discussed above.

The solution of this problem is defined by a flooring system comprising the features of claim 1. A feature analysis of claim 1 is presented in the following:

Feature analysis of claim 1:

- 1) A flooring system, comprising a plurality of rectangular floor panels (1, 2), which are mechanically connectable to each other in parallel rows along adjacent long edges (3, 4) and short edges (3', 4'), respectively, of the panels,
- 2) said floor panels being provided with means for mechanically locking together their long edges (3, 4) as well as their short edges (3', 4') in a first direction (D1) at right angles to the principal plane of the panels, thereby forming first mechanical connections between the panels (1, 2);

characterised in

3) that each panel, at a rear side thereof, being provided:

3a) (i) with a locking strip (6, 6') at one long edge (3) and at one short edge (3'), each locking strip (6, 6') being integrally formed in one piece with the panel (1, 2) and forming an extension of a lower part of the corresponding edge of the panel (1, 2) and extending throughout substantially the entire length of the corresponding edge of the panel and being provided with a projecting locking element (8), and

3b) (ii) with a locking groove (14, 14') at an opposite long edge (4) and at an opposite short edge (4'), each locking groove (14, 14') extending parallel to and spaced from the corresponding edge (4, 4') and being open at a rear side of the panel (1, 2),

3c) said locking strips (6, 6') and locking grooves (14, 14') forming second mechanical connections locking the panels to each other in a second direction (D2) parallel to the principal plane and at right angles to the joint edges (3, 4; 3', 4'), such that a strip (6, 6') of a first one (1) of two joined panels projects on the rear side of the second panel with its locking element (8) received in the locking groove (14, 14') of the second panel (2),

4) that the first mechanical connection allows mutual displacement of the panels (1, 2) in the direction of the long edges (3, 4),

5) that the panels, when joined together along their long edges (3, 4), can occupy a relative position in said second direction (D2) where a play (Δ) exists between the locking groove (14) and a locking surface (10) on the locking element (8) that is facing the long edges (3, 4), such that also the second mechanical connection allow mutual displacement of the panels (1, 2) in the direction of the long edges (3, 4),

6) that the second mechanical connection along the long edges (3, 4) is so conceived as to allow the locking element (8) to leave the locking groove (14)

if the panel (2) associated with the locking groove (14) is turned about its long edge (4) angularly away from the strip (6), and

- 7) that each locking strip (6') at the short edges (3', 4') is flexible and resilient such that two panels (1, 2), having already been mechanically joined to a common long edge of a third panel, can be mechanically joined together at their adjacent short edges (3', 4') by displacing said two panels horizontally towards each other, while resiliently urging the flexible strip (6') at one (3') of said short edges downwards, until said adjacent short edges (3', 4') of the two panels (1, 2) have been brought into complete engagement with each other horizontally and the locking element (8) at said one short edge (3') thereby snaps into the locking groove (14') at the second short edge (4').

2. Article 123 (2) and (3) EPC

Claim 1 of the Opposed Patent contravenes Art. 123 (2) EPC because it includes features which extend beyond the application as originally filed. In the present case, the Opposed Patent is based on the PCT-application with the publication number WO 94/26999, referred to as the original application in the following.

Feature 3a) in claim 1 of the Opposed Patent refers to a locking strip at one long edge and at one short edge of each panel, each locking strip being integrally formed in one piece with the panel. This definition of the locking strip does not find support in the original application. On page 12, lines 23 to 24, it is stated "Alternatively, the strip 6 may be integrally formed with the strip panel 1". However, this statement cannot be read in isolation or taken as support for the feature in granted claim 1. The original disclosure must be considered as a whole in determining whether this feature of claim 1 is sufficiently supported. It will be noted that the statement on page 12 appears in the context of the description of Figs. 1a and 1b and, more specifically, in the description of the strip shown in these figures. The illustrated strip is a strip which is separate from the strip panel. Also on page 12, lines 15 to 17 and 24 to 26, it is clearly stated that the separate strip is flexible and resilient and that it should be integrated with the strip panel, i.e. it should not be mounted on the strip panel in connection with laying. Further, it should be noted that this embodiment of Fig. 1 as well as those of Figs. 2 and 3 specifically relate to separate strips and these strips are always those which are described as being flexible and resilient. See, for example, page 12, line 15 and page 16, lines 24 to 26. Therefore, the disclosure at page 12, lines 23 and 24, with respect to the strip being integrally formed with the strip panel, is only made as an aside in the description of embodiments with separate strips, which are flexible and resilient. If an integral strip is to be used, other passages of the description clearly teach that further essential features must be provided.

This is taught in the description of the embodiment described with reference to Fig. 5 on page 17, line 37 to page 18, line 35 of the original application. At the bottom of page 17 and the top of page 18, it is stated that in the embodiment of Fig. 5, the strip 6 and its locking element are integrally formed with the strip panel 1. However, it is further stated that: "On the underside of the strip panel 1, there is provided a separate strip, band or the like 74 extending throughout the entire length of the joint and having, in this embodiment, a width covering approximately the same surface as the separate strip 6 of the previous embodiments." Here, a clear distinction is made between a strip panel having an integral strip 6 and a strip panel having a separate strip 6. This distinction is the provision of an additional, separate strip, band or the like 74 in addition to the integral strip, as shown in Fig. 5, as opposed to a separate strip 6 of the previous embodiments, namely those described with reference 2, Fig. 1 to 4.

The case law of the EPO Boards of Appeal on amendments should also be considered. Decisions T 157/90 and T 397/89 state that formal support in the original application is insufficient for the generalisation of a feature. If the original application only describes specific embodiments and the general applicability of the feature was not evident to the skilled person, then a generalisation is inadmissible under Art. 123 (2). In the present case, there are many indications in the original application, which clearly and unambiguously teach the skilled person that an integral strip alone was not intended or feasible without the provision of the additional separate strip, band or the like 74. As previously stated, the embodiments Figs. 1 to 4, 6 and 7 describe a separate locking strip which is flexible and resilient. Only the embodiment of Fig. 5 illustrates an integral strip, but with the additional separate strip, band or the like 74. Most importantly, however, the description makes a clear distinction between the method of laying the panels when the locking strip can be bent or not. On page 18, lines 18 to 30 of the original application, it is stated that: "When using a material which does not permit downward bending of the strip 6 or the locking element 8, laying can be performed in the way shown in Fig. 5." The laying method of Fig. 5 involves the positioning at an angle of one panel with respect to the other and the subsequent angling down of the angled panel into the same plane as the other panel to create the mechanical connection by means of the locking strip and the locking groove. This is because the locking strip does not bend. The only bendable locking strips disclosed in the original application are those which are stated to be resilient and flexible and these are the separate strips described with reference to Figs. 1 to 4, 6 and 7. It must also be noted that the entire description refers to the panels being thin, compact and hard. See, for example, the definition of the object of the invention on page 5, lines 14 to 18, the advantages of such thin, compact panels (page 4, lines 11 to 18 and page 5, lines 26 to 30) and emphasizes the advantage of the invention with respect to hard, thin floors (page 8, lines 1 to 3). Therefore, the skilled person clearly and unambiguously understands that the provision of an integral strip in a thin, hard and compact panel requires an additional separate strip, band or the like which would also preferably extend over the same surface as embodiments with a separate locking strip (page 18, lines 7 to 9), so that sufficient

- reinforcement is provided. As already stated, an additional limitation is made with respect to the fact that a special laying method should be used for locking strips which are not flexible.

In summary, claim 1 includes a generalisation in terms of the definition of an integral locking strip without defining the additional essential feature of the further strip, band or the like 74. Therefore, in accordance with the case law of the Boards of Appeal, this generalised feature represents an inadmissible extension which goes beyond the original application as filed and contravenes Art. 123 (2) EPC.

- 2.2. Claim 1 of the Opposed Patent includes a further inadmissible extension. Considering feature 3a) relating to the integral locking strip, as already discussed above, and feature 7, according to which each locking strip at the short edges is flexible and resilient to permit adjacent short edges of two panels to be mechanically joined by displacing the two panels horizontally towards each other, while resiliently urging the flexible strip at one of the short edges downwards, an inadmissible combination of features has been made which is not supported by the original application.

As becomes apparent from the discussion above in section 1.1. in relation to an integral locking strip, the fact that this can be flexible and resilient has only been described in relation to the embodiments of Figs. 1 to 4, 6 and 7. However, these embodiments all relate to a separate locking strip and not an integral locking strip. Further, the only method of laying panels with an integral locking strip is disclosed with reference to Fig. 5 at page 18, lines 18 to 32. However, here the short edges are joined by way of the method of angling down one of the panels with respect to the other. Apart from the fact that there is no disclosure of an integral locking strip on a short edge of a panel, there is also no disclosure of a method of laying panels at the respective short edges in which the strip is integral. Certainly, there is no description of a laying method in which short edges are to be joined by means of an integral strip, which is also flexible and resilient.

In summary, claim 1 as granted combines by way of features 3a) and 8 the definition of a flooring system with integral strips which, firstly, are flexible and resilient and, secondly, permit mechanical joining of adjacent short edges of two panels by displacing the two panels horizontally towards each other. This combination of features finds no support in the original application. On the contrary, the skilled person is clearly and unambiguously taught by the original application that integral strips are not resilient and flexible and that a different laying method, namely that with the angling down of one panel with respect to the other must be used when integral strips are provided. See page 17, line 36 to page 18, line 32.

Therefore, this combination of features also represents an inadmissible extension beyond the original disclosure of the application as filed and consequently, contravenes Art. 123 (2) EPC. In this regard, it is already added at this stage that

the Opponent will strongly object to any attempt of the patentee to correct this inadmissible extension by trying to redefine the integral strip as a separate strip or redefining the arrangement of the strips on the short edges such that these can be mechanically connected by the angling down method rather than the horizontal displacement method because either of these methods would broaden the scope of granted claim 1 and consequently violate Art. 123 (3) EPC.

3. Lack of novelty and inventive step

The subject matter of all claims 1 to 9 of the Opposed Patent are not patentable in view of the following prior art documents:

O1: DE-AS-1212275

O2: US-4,426,820

O3 : DE-3-3343601

O4 : GB-A-2256023

O5 : DE-A-2238660

O6 : JP-3-169967

All of the above-mentioned documents O1-O6 were published before the priority date of May 10, 1993 and the filing date of May 29, 1994 of the Opposed Patent. In this regard, it is noted that the Opposed Patent is not entitled to the claimed priority because the priority document SE 9301595 does not disclose or provide support for the feature of claim 1 of the Opposed Patent defining the integral locking strip.

3.1 Lack of novelty

With reference to the previously elaborated feature analysis of claim 1 and using the reference signs of O1, this prior art document discloses a flooring system comprising a plurality of rectangular floor panels 10 which are mechanically connectable to each other in parallel rows along adjacent long edges and short edges, respectively, of the panels 10 (feature 1), said floor panels being provided with means 11-14 for mechanically locking together their long edges as well as their short edges in a first direction at right angles to the principal plain of the panels, thereby forming first mechanical connections between the panels 10 (feature 2). See Figs. 1 and 4 and the description at column 1, lines 1 to 12.

Each panel 10, at the rear side thereof, is provided with a locking strip 11, 12 at one long edge and at one short edge, each locking strip 11, 12 being integrally formed in one piece with the panel 10 and forming an extension of a lower part of the corresponding edge of the panel and extending throughout substantially the entire length of the corresponding edge of the panel and being provided with a projecting locking element (feature 3a). See Figs. 1 and 2 as well as the description at column 2, line 43 to column 3, line 3. The locking strip is especially apparent from the left-hand side of Fig. 2 beneath the groove 13b, the locking

element being in the form of the projection extending vertically above the locking strip beneath the narrowest part of the groove 13b and having a width a.

Further, the system of O1 has a locking groove at an opposite long edge and an opposite short edge of the panel 10, each locking groove extending parallel to and spaced from the corresponding edge and being open at a rear side of the panel 10 (feature 3b). See the right-hand side of Fig. 2 where the groove is formed in the lower part of the right-hand panel beneath the projection 12 and has a side wall 15 and a length b. The locking strips and locking grooves form a second mechanical connection locking the panels 10 to each other in a second direction parallel to the principal plain and at right angles to the joint edges such that a strip of a first one of two joint panels projects on the rear side of the second panel with its locking element received in the locking groove of the second panel 10. This is immediately evident from the description at column 3, lines 4 to 19 and the imagined locked position of the two panels illustrated in Fig. 2.

The first mechanical connection allows mutual displacement of the panels in the direction of the long edges (feature 4). See the description of O1 from column 2, lines 51 to column 3, line 3 according to which adjacent short edges of two panels are joined, after the long edges of these panels have been connected to an already laid row, are pushed together to snap the projection 11 into the groove 14. In this regard, see also column 1, lines 34 to 41. Further, the panels 10, when joined together along their long edges, can occupy a relative position in the second direction where a play exists between the locking groove and a locking surface of the locking element that is facing the long edges such that also the second mechanical connection allows mutual displacement of the panel 10 in the direction of the long edges (feature 5). This is apparent from the passages already cited above with respect to feature 4 as well as the description at column 3, lines 4 to 18, as the size of the projecting part 11, 12 is chosen to be smaller than the space defined by the groove 13, 14 to permit mutual displacement of the panels. Therefore, there is inevitably a play.

Finally, each locking strip at the short edges is flexible and resilient such that two panels 10, having already being mechanically joined to a common long edge of a third panel, can be mechanically joined together at their adjacent short edges by displacing the two panels horizontally towards each other, while resiliently urging the flexible strip at one of the short edges downwards, until said adjacent short edges of the two panels have been brought into complete engagement with each other horizontally and the locking element at the one short edge thereby snaps into the locking groove at the second short edge (feature 7). The fact that the locking strip at the short edge is flexible and resilient is immediately apparent from the shape of the projections and grooves of the respective panels and the fact that the panels are made of rubber. Additionally, the projections 11 are described to be resilient. See column 2, lines 40 to 47. Therefore, the lower part of the panel edge with the locking strip defined at the lower side of the groove will inevitably give by being resiliently urged downwards when the projection is being inserted into

the groove. The horizontal displacement of two panels to join respective short edges of the two panels is apparent from the same description passages cited above with respect to features 4 and 5, especially column 2, line 51 to column 3, line 3 as this occurs "durch Anpressen senkrecht zu den Stirnflächen, so daß the Ansatz 11 in die Nut 14 einschnappt."

In summary, the flooring system of O1 explicitly discloses all features of claim 1, except feature 6 relating to the second mechanical connection along the long edges, which is so conceived to allow the locking element to leave the locking groove, if the panel associated with the locking groove is turned about its long edge angularly away from the strip. However, this feature can be considered to be implicitly disclosed by O1 in view of the fact that the floor panels comprise bendable rubber (column 1, lines 1 to 3). The skilled person would implicitly assume that, if the two panels of Fig. 2 were in the joined position and the left-hand panel were to be angled outwardly, the locking element would leave the locking groove.

Therefore, claim 1 lacks novelty over O1. In any case, the skilled person immediately understands from a connection of the type shown in Fig. 2 of O1 that it is easier to release the resilient joint by angling one panel with respect to the other to remove the projection from the groove since this would require a smaller exertion of force.

3.2. Lack of inventive step

Should the Opposition Division for any unexpected reason take feature 6 of claim 1 to be novel over O1, then claim 1 certainly lacks an inventive step.

Proceeding on the basis of a flooring system known from O1, the skilled person may be faced with the problem of providing a more simple system for releasing the joints at the longitudinal edges of connected panels. In this regard, the skilled person becomes aware of any of the documents O2 to O5. For example, with reference to Figs. 17 to 26 of O2, this discloses a flooring system comprising a plurality of floor panels, mechanically connectable to each other in parallel rows along adjacent long edges and short edges of the panels, said panels being provided with means for mechanically locking together their long edges as well as their short edges in a first direction at right angles to the principal plane of the panels, thereby forming first mechanical connections between the panels. See O2 at column 2, lines 59 to 66, column 3, lines 10 to 18, column 5, lines 35 to 51 and the description of the three embodiments with reference to Figs. 18 to 20, 21 to 23 and 24 to 26, respectively, from column 5, line 52 to column 6, line 32. Therefore, features 1 and 2 of claim 1 are known from O2.

Additionally, for example with reference to Figs. 21 to 23, each panel 70 is provided with a locking strip at one long edge 50 and one short edge 50', each locking strip being integrally formed in one piece with the panel 50 and forming

an extension of a lower part of the corresponding edge of the panel and extending throughout substantially the entire length of the corresponding edge of the panel and being provided with a projecting locking element (feature 3a). A locking groove is provided at an opposite long edge and at an opposite short edge, each locking groove extending parallel to a space from the corresponding edge and being open at a rear side of the panel (feature 3b). This is immediately evident from Figs. 21 to 23 and the associated description at column 6, lines 6 to 20. The locking strips and locking grooves form a second mechanical connection locking the panels to each other in a second direction parallel to the principal plane and at right angles to the joint edges such that a strip of a first one of the two joint panels projects on the rear side of the second panel with its locking element received in the locking groove of the second panel. This is apparent from the description of Figs. 18 to 20 at column 5, line 52 to column 6, line 5, which is referred to as basically also applying to the embodiment of Figs. 21 to 23 in column 6, lines 6 to 20. Therefore, feature 3c) is also known from O2.

The second mechanical connection along the long edges is so conceived as to allow the locking element to leave the locking groove if the panel associated with the locking groove is turned about its long edge angularly away from the strip. This is feature 6 of claim 1 of the Opposed Patent. It would be an obvious measure for the skilled person to replace the design of the joint of a flooring system known from O1 with one described above as known from O2 in order to solve the problem of permitting more easy joining and separation of the panels. As no clamping elements are required (see column 2, lines 24 to 36 and 59 to 61, it is inevitable that the joining process can be reversed to separate the panel.

Therefore, claim 1 lacks an inventive step over a combination of O1 and O2.

This also applies to a combination of O1 and O3. Referring to the reference signs of O3 shown in the Figs. and the associated description, O3 discloses a flooring system comprising a plurality of rectangular floor panels 1, 2 which are mechanically connectable to each other in parallel rows along adjacent long edges 100 and short edges 200, respectively, of the panels, said floor panels being provided with means 10 for mechanically locking together their long edges 100 as well as their short edges 200 in a first direction at right angles to the principal plane of the panels, thereby forming first mechanical connections between the panels (features 1 and 2, see the description at column 3, lines 37 to 39 and 45 to 47 as well as column 4, lines 8 to 33).

Each panel, at a rear side thereof, is provided with a locking strip 10 at one long edge and at one short edge, each locking strip forming an extension of the lower part of the corresponding edge of the panel and extending throughout substantially the entire length of the corresponding edge of the panel and being provided with a projecting locking element. In Fig. 1, 2 and 4, the locking strip and locking element are provided by the lower, longer finger of the locking means 10 as viewed in the Figure 1. A locking groove is provided at an opposite long edge and

an opposite short edge, each locking groove extending parallel to and spaced from the corresponding edge and being open at a rear side of the panel (feature 3b). See Figs. 1, 3 and 4 and the associated description at column 4, lines 19 to 33 and column 4, line 64 to column 5, line 7. The locking strips and locking grooves forming the second mechanical connections lock the panels to each other in a second direction parallel to the principal plane at right angles to the joint edges 100, 200 such that a strip of a first one of the two joint panels projects on the rear side of the second panel with its locking element received in the locking groove of the second panel (feature 3c). See Figs. 1, 2 and 4 and the associated description, especially those already cited above with regard to feature 3a and 3b. The first mechanical connection allows mutual displacement of the panels in the direction of the long edges (feature 4). See column 4, lines 34 and 35. The second mechanical connection along the long edges is so conceived as to allow the locking element to leave the locking groove if the panel associated with the locking groove is turned about its long edge angularly away from the strip (feature 6). See O3 at claim 1, line 1 and column 4, lines 10 to 18.

For the same reasons as outlined above, with respect to the combination of O1 and O2, the subject matter of claim 1 is rendered obvious to the skilled person faced with the problem of providing a simple means of separating the long edges of panels in a flooring system by providing the connection of the long edges known from O3 in a system known from O1. Therefore, claim 1 also lacks an inventive step over this combination.

Claim 1 is also rendered obvious by a combination of O1 and O4. With reference to the figure description of O4, this discloses a flooring system (page 7, last paragraph) comprising a plurality of rectangular floor panels which are mechanically connectable to each other in parallel rows along adjacent long edges of the panels, the floor panels being provided with means 6, 10 for mechanically locking together long edges in a first direction at right angles to the principal plane of the panels, thereby forming mechanical connections between the panels. See Figs. 4 and 5, page 1, first paragraph, and page 3, first paragraph. Each panel is provided at a rear side thereof with a locking strip 7 at one long edge, the locking strip being integrally formed in one piece with the panel and forming an extension of a lower part of the corresponding edge of the panel and extending throughout substantially the entire length of the corresponding edge of this panel and being provided with a projecting locking element 16 (feature 3a). See Fig. 3 and page 5, first two complete paragraphs, and the paragraph bridging pages 5 and 6. A locking groove 8 is provided at an opposite long edge of each panel, each locking groove extending parallel to and spaced from the corresponding edge 15 and being open at a rear side of the panel (feature 3b), see Fig. 3 as well as page 5, second complete paragraph. The locking strip 7 and locking groove 8 form a second mechanical connection locking the panels to each other in a second direction parallel to the principal plane and at right angles to the joint edges such that a strip of a first one of two joined panels projects on the rear side of the second panel with its locking element 16 received in the locking groove 8 of the second panel

(feature 3c). See Figs. 3 and 5 and the associated description in the second to fifth complete paragraphs of page 6. The second mechanical connection along the long edges is so conceived as to allow the locking element 16 to leave the locking groove 8, if the panel associated with the locking groove 8 is turned about its long edge angularly away from the strip 7 (feature 6). See page 3, first two paragraphs and page 5, last complete paragraph.

For the same reasons outlined above with respect to the combinations of O1 and O2 as well as O1 and O3, the skilled person faced with the problem in a system of O1 to provide an easier method of joining and separating adjacent panels along the long edges would replace the connection of the long edge in O1 with that known from O4 and arrive at the subject matter of claim 1 in an obvious manner.

Claim 1 also lacks an inventive step over a combination of O1 and O5. O5 discloses a flooring system (page 1, first paragraph, and page 4, second complete paragraph) comprising a plurality of floor panels which are mechanically connectable to each other in parallel rows along adjacent long edges of the panels, the panels being provided with means for mechanically locking together their long edges in a first direction at right angles to the principal plane of the panel, thereby forming first mechanical connections between the panels (features 1 and 2). See Figs. 1 and 2 and the associated description, especially page 4, last paragraph to page 5, first complete paragraph. Each panel, at a rear side thereof, is provided

with a locking strip 4 at one long edge, each locking strip 4 being integrally formed in one piece with the panel and forming an extension of a lower part of the corresponding edge of the panel, extending throughout substantially the entire length of the corresponding edge of the panel and being provided with a projecting locking element 3 (feature 3a). See the paragraph bridging pages 4 and 5 of O5. A locking groove is provided at an opposite long edge of each panel, the locking groove extending parallel to and spaced from the corresponding edge and being open at the rear side of the panel (feature 3b), see Figs. 1 and 2 and the description in the last paragraph of page 4 to the first complete paragraph of page 5. The locking strip 4 and the locking groove form a second mechanical connection locking the panels to each other in a second direction parallel to the principal plane and at right angle to the joint edges such that a strip 4 of a first one of two joined panels projects on the rear side of the second panel with its locking element 3 received in the locking groove of the second panel (feature 3c). See Fig. 1 as well as the description from the bottom of page 4 to the first three paragraphs of page 5 as well as claim 1 of O2. The second mechanical connection along the long edges is so conceived as to allow the locking element 3 to leave the locking groove if the panel associated with the locking groove is turned about its long edge angularly away from the strip 4 (feature 6). This is illustrated most clearly in Fig. 2.

For the same reasons outlined above with respect to the combination of O1 with any of O2 to O4, it would be obvious for the skilled person to replace the joint

- mechanism along the long edges of the panel of O1 with a system known from O5 in an obvious manner, such as to arrive at the subject matter of claim 1.

In summary, if the skilled person wishes to solve the problem of providing a more simple connection between the long edges of adjacent panels in a flooring system known from O1, it would be obvious for the skilled person to replace the joint mechanism of O1 with any of the mechanisms known from O2 to O6. This especially applies with respect to the systems known from O3 and O4 as these permit mutual displacement of panels joined along the long edges even while the panels are joined. Therefore, the skilled person having knowledge of O1 could maintain the laying method of O1 as well as the associated joint mechanism for the short edges and still apply the joint mechanism of the long edges known from O3 and O4 because the joint mechanisms for the long edges known from O3 and O4 permit displacement of a panel in the direction of the joint at the long edges, to release the joint at the short edges, so as to be able to subsequently easily release the joint at the long edges known from any of O2 to O6, and especially O3 and O4, by turning one panel upwards with respect to the other. Therefore, claim 1 lacks an inventive step.

3.3 Dependent claims

The subject matter of dependent claims is known from O1, see the locking element beneath the narrowest part of the groove 13b in Fig. 2 and the planar view of Fig. 1. Therefore, claim 6 in combination with claim 1 lacks novelty over O1. The subject matter of claim 6 is also known from O2, Figs. 21 to 23, reference 55. Claim 6 is also known from O2 at column 3, lines 45 to 47 and Figs. 1, 2 and 4. The feature of claim 6 is also known from O4. See Fig. 3, reference signs 16 and the illustration of Fig. 5, showing this element without the reference sign. O5 also discloses the feature of claim 6 as the locking element 3 extends along the entire length. See the paragraph bridging pages 4 and 5. Finally, O6 which also describes a flooring system comprising a plurality of panels discloses a panel with a locking strip 4a, 4b having a locking element extending along the entire length thereof. See Figs. 1 and 2 and the description of the English-language translation in the paragraph bridging pages 8 and 9.

The subject matter of claims 2 and 3 is known from O2, O3 and O5. See O2 in Figs. 17 to 20 and 24 to 26 and the associated description, O3 at column 4, claim 1, line 1 and column 4, line 10 to 18 and O5 at Fig. 2 and the associated description in the paragraph bridging pages 4 and 5 and the first complete paragraph of page 5.

The subject matter of claim 4 is rendered obvious to the skilled person by the teaching of O6 from page 8, last paragraph to page 9, first paragraph, which especially describes the downward elastic deformation of the lower piece 4b of the

- .. fitting concave portion 4 at the time of coupling, with cooperation of the bevelled surfaces 4b and 3a. It would be obvious to the skilled person to apply this feature in a joining mechanism with resilient urging of a flexible strip upon horizontal displacement of panels towards each other to provide bevils in order to ensure smoother joining.

The subject matter of claim 5 does not provide the basis for an inventive step in combination with claim 1. The height of the locking element is a mere design choice for the skilled person, depending on overall dimensions of the panels of the flooring system and the need to ensure sufficient locking in a joint between two panels.

Claim 6 has already been discussed above.

The subject matter of claim 7 to 9 relating to an underlay and a sealing means also represent mere design options for the skilled person depending on whether sound proofing or moisture-proof joining of panels is required so that these claims cannot provide the basis for an inventive step in combination with claim 1.

4. Summary

Claim 1 of the Opposed Patent contravenes Art. 123 (2) in at least two instances so that this claim is inadmissible. Further, the subject matter of claim 1 and 6 lacks novelty and the subject matter of all claims 1 to 9 lack an inventive step for the reasons outlined above.

Therefore, the request to revoke the patent in full is justified.

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